UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,096	12/04/2001	Daiji Naka	2001-1797A	8716

513 7590 11/29/2004

WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER	
BELYAVSKYI, MICHAIL A	

ART UNIT	PAPER NUMBER
1644	

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/000,096	NAKA ET AL.	
	Examiner	Art Unit	
	Michail A Belyavskyi	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) *8,11-22,25,29 and 30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5, 7,9-10, 23-24, 26-28, 31- 33* is/are rejected.

7)☒ Claim(s) *6* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

RESPONSE TO APPLICANT'S AMENDMENT

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/01/04 has been entered.

2. Claims 1-33 are pending.

Claims 8, 11-22, 25 and 29-30 are withdrawn from further consideration by the Examiner, 37 C.F.R. § 1.142(b) as being drawn to nonelected inventions.

Claims 1-7, 9-10, 23-24, 26-28 and 31-33 are under consideration in the instant application.

3. Claims 26 – 28 are objected to as being dependent upon non-elected claim 25. Appropriate correction is required.

In view of the amendment, filed 10/01/04 the following rejections remain.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5 ,7 , 9-10, 31 and 32 stand rejected under 35 U.S.C. 102(b) as being anticipated by EP 0596524 (IDS) as is evidenced by Goldsby et al (Immunology, Fifth edition, 2000, pages 137-139) for the same reasons set forth in the previous Office Action, mailed 12/19/03.

Applicant's arguments, filed 09/03/04 have been fully considered, but have not been found convincing.

Applicant asserts that : (i) Declaration under 37 C.F.R 1.132 by Mr. Shimomura, a co-inventor of EP' 524 confirms that antibody disclosed in EP'524 recognized both active and inactive HGFA in contrast with the antibody of the claimed invention; (ii) Declaration under37 C.F.R 1.132 by Mr. Naka, co-inventor of the present application confirms that ELISA studies confirm that the prior art antibodies recognized both active and inactive HGFA, while monoclonal antibodies derived from the deposit hybridoma clone AHGA-A, deposit under FERM BP-7779 do not recognized inactive HGFA.

Contrary to Applicant's assertion it is noted that the instant claims recited an antibody that does not " substantially recognized inactive HGFA". There is no recitation of an antibody that "does not recognized inactive HGFA" as asserted in Declaration under37 C.F.R 1.132 by Mr. Naka or that " inactive HGFA cannot be detected by ELISA immunoassay and that a dissociation constant for inactive HGFA is $1x10^{-5}$ or higher" as disclosed in the instant specification on page 11, lines 5-11. The recitation of an antibody that "does not substantially recognized inactive HGFA" does not precluded said antibody to bind both inactive or active form of HGFA taught by EP'524 an confirmed by Declaration under 37 C.F.R 1.132 by Mr. Shimomura.

Claim 2 is included because the claimed functional limitation would be inherent properties of the referenced antibody as is evidenced by by Goldsby et al. Goldsby et al., teach that dissociation constant of antibody used for SDS-PAGE is about $1x\ 10^{-9}$ M(see table 6-1 in particular). In addition, the claimed functional limitation would be inherent properties of the referenced antibody because the referenced antibody was obtained against the same antigen using the same strategy and method as claimed, thus the claimed antibody would inherently shows a dissociation constant of about $1x\ 10^{-9}$ M in the absence of evidence of structural difference.

Claim 32 is included because the claimed functional limitation would be inherent properties of the referenced antibody, since both antibody recognized HGFA and the instant specification does not indicated what specific epitope recognized by claimed antibody. Since the office does not have a laboratory to test the reference antibody , it is applicant's burden to show that the reference antibody does not recognized the same epitope as claimed. See *In re Best*, 195 USPQ 430, 433 (CCPA 1977); *In re Marosi*, 218 USPQ 289, 292-293 (Fed. Cir. 1983); *In re Fitzgerald et al.*, 205 USPQ 594 (CCPA 1980).

The reference teaching anticipates the claimed invention.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 23-24 and 26-28 stand rejected under 35 U.S.C. 103(a) as being obvious over EP 0596524 in view of Zuk et al. (U.S. Patent No. 4,281,061) for the same reasons set forth in the previous Office Action, mailed 12/19/03.

Applicant's arguments, filed 09/03/04 have been fully considered, but have not been found convincing.

Applicant asserts that because EP'524 does not teach or suggest the claimed antibody, the combined references fail to teach each and every element of the claimed invention.

As has been discussed, supra it is the Examiner position that recitation of an antibody that "does not substantially recognized inactive HGFA", in the instant claims does not precluded said antibody to bind both inactive or active form of HGFA taught by EP'524.

EP '524 does not teach a kit comprising antibody that recognize an active HGFA for detecting or measure active HGFA.

US Patent '061 teaches that reagents of the pharmaceutical compositions can be provided as kits as a matter of convenience , optimization and economy of the users (see col 22, line 62 - col 23, line 4 in particular).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the teaching of US Patent '061 to those of EP '524 to obtain a claimed kit comprising antibody that recognize an active HGFA for detecting or measure active HGFA.

One of ordinary skill in the art at the time the invention was made would have been motivated to do so, because assembling the reagents in a kit format a matter of convenience , optimization and economy of the users as taught by US Patent '061 and the antibody taught by EP '524 can be in a pack or a kit for convenience and economy.

From the combined teaching of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention.

Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

The following new ground of rejection are necessitated by the amendment filed 10/01/04

8. The following is a quotation of the second paragraph of 35 U.S.C. 112.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-7, 9-10, 23-24, 26-28 and 31-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 4, 7, 23, 24 and 33 are indefinite and ambiguous in the recitation of "does not substantially recognize..". The characteristics and metes and bounds of the term "does not substantially recognize" are unclear , indefinite, not defined by the claim and the specification does not provide a standard for ascertaining how to determine antibody that "does not substantially recognize" inactive HGFA.

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 31 and 32 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. **This is a New Matter rejection.**

(i) " The antibody which exhibits lower reactivity to active HGFA when active HGFA form a complex with nafamostat mesylate" claimed in claim 31 and (ii) ' An antibody that recognized the same epitope as antibody produced by hybridoma of an accession number FERM BP-7779" claimed in claim 32 represent a departure from the specification and the claims as originally filed. The passages pointed by the applicant do not provide a clear support for " The antibody which exhibits lower reactivity to active HGFA when active HGFA form a complex with nafamostat mesylate" claimed in claim 31 and (ii) "An antibody that recognized the same epitope as antibody produced by hybridoma of an accession number FERM BP-7779" claimed in claim 32

The specification and the claims as originally field only support for (i) an antibody that recognized an active HGFA and does not substantially recognized inactive HGFA, and (ii) an antibody produced by a hybridoma of an accession number FERM BP-7779.

12 . Claim 32 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant is in possession of : an antibody produced by a hybridoma of an accession number FERM BP-7779.

Applicant is not in possession of : An antibody that recognized the same epitope as antibody produced by hybridoma of an accession number FERM BP-7779.

The claimed invention is drawn to a genus of antibodies that recognized the same epitope as antibody produced by hybridoma of an accession number FERM BP-7779. However, the specification fails to define any specific epitope that is recognized by antibody produced by hybridoma of an accession number FERM BP-7779. Neither the exemplary embodiments nor the specification's general method appears to describe structural features, in structural terms, that are common to the genus. That is, the specification provides neither a representative number of species to describe the claimed genus, nor does it provide a description of structural features that are common to species(specific epitope that is recognized by antibody produced by hybridoma of an accession number FERM BP-7779). The specification's disclosure is inadequate to describe

the claimed genus of an antibody that recognized the same epitope as antibody produced by hybridoma of an accession number FERM BP-7779.

Applicant has disclosed a limited number of species; therefore, the skilled artisan cannot envision all the contemplated antibody possibilities recited in the instant claims. Consequently, conception in either case cannot be achieved until a representative description of the structural and functional properties of the claimed invention has occurred, regardless of the complexity or simplicity of the method. Adequate written description requires more than a mere statement that it is part of the invention. The sequences themselves are required. See Fiers v. Revel, 25 USPQ2d 1601, 1606 (CAFC 1993).

A description of a genus of antibody that recognized the same epitope as antibody produced by hybridoma of an accession number FERM BP-7779 may be achieved by means of a recitation of a representative number of species defined by amino acid sequence, falling within the scope of the genus, or of a recitation of structural features common to the genus, which features constitute a substantial portion of the genus. Regents of the University of California v. Eli Lilly&Co., 119F3d 1559, 1569, 43 USPQ2d 1398, 1406 (Fed. Cir. 1997).

Vas-Cath Inc. v. Mahurkar, 19 USPQ2d 1111, makes clear that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. The invention is, for purposes of the written description inquiry, whatever is now claimed." (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See Vas-Cath at page 1116.). Consequently, Applicant was not in possession of the instant claimed invention. See University of California v. Eli Lilly and Co. 43 USPQ2d 1398.

Applicant is directed to the Guidelines for the Examination of Patent Applications Under the 35 U.S.C. 112, ¶ 1 "Written Description" Requirement, Federal Register, Vol. 66, No. 4, pages 1099-1111, Friday January 5, 2001.

13. No claim is allowed

14. Claim 6 is objected to as being dependent upon a rejected base claim 1, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michail Belyavskyi whose telephone number is 571/ 272-0840 The examiner can normally be reached Monday through Friday from 9:00 AM to 5:30 PM. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on 571/ 272-0841 .

The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michail Belyavskyi, Ph.D.
Patent Examiner
Technology Center 1600
November 24, 2004.

CHRISTINA CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600